Istituto Italiano degli Attuari
and Ordine degli Attuari (ISOA)
and the AFIR-ERM Section
of the International Actuarial Association

AFIR-ERM
COLLOQUIUM 2019
INNOVATING
ACTUARIAL
RESEARCH ON
FINANCIAL RISK
AND ERM

Florence, Italy 21-24 May 2019
WELCOME TO AFIR-ERM COLLOQUIUM 2019

The scientific programme of the Colloquium, as you can see, is varied and rich and addresses several topics in the areas of financial risks and enterprise risk management. However, rather than proposing a list, I wish to emphasize a kind of theme or fil-rouge which, in my opinion, connects all the Colloquium days, from the Opening Ceremony up to the final Workshops. What I mean is, first of all, the focus on Environment Social Governance (ESG) and Responsible Investments, which are at the core of the first two keynote talks, by Card. Peter Turkson and Dr. Will Martindale. Here we really touch the great challenges of our time: the immense environmental and social problems and risks (from climate changes to poverty and migration), which require political, financial, actuarial responses both urgent and high profile. And, secondly, a good part of the Colloquium will be devoted to Big Data technologies, to Statistical Machine Learning and its applications in Actuarial Modelling. In fact, we can possess and manage an unprecedented and unexpected, up to few years ago, mass of data. And therefore, as actuaries, as applied mathematicians, as economical and political scientists, we are posed before the question: how to manage this enormous quantity of information, how to organize and model it, precisely in order to deal with the dramatic problems and risks enlightened in the Colloquium Opening. So, let me say that, in my opinion, actuaries, in particular young actuaries, may be the best equipped experts, because of their scientific and professional background and the amplitude of their interests and interactions, for accepting this challenge, for proposing innovative models of risk management which could be adequate to both the size of the problems and the power of the new technologies.

To all of you I wish a fruitful participation at the Colloquium and a joyful stay in Firenze.

Marcello Galeotti
AFIR-ERM Colloquium Programme

Tuesday, May 21, 2019

CONFERENCE CENTER
10:00-13:00  Registration

SALA PRINCIPE CARREGA
11:00-12:00  Scientific Committee Meeting

SALA PRINCIPE CARREGA
12:00-13:00  AFIR-ERM Board Meeting

B ROOF RESTAURANT
13:00  Business Lunch

14:30-19:00  Registration

SALA MICHELANGELO
15:00-18:00  PLENARY 1
Opening Address
Chair: Marcello Galeotti

Michael Sherris, AFIR-ERM President
Marcello Galeotti, Colloquium President
Marco Bindi, University of Florence - Prorrettore
Ermanno Pitacco, Scientific Committee President
Giampaolo Crenca, Organizing Committee President/ISOA President

Investment within the framework of the Environment, Society and Governance, A Catholic Church Perspective
Cardinal Peter Turkson - Cardinal of the Roman Catholic Church. Prefect of the Dicastery for Promoting Integral Human Development

Why sustainable finance is inevitable
Will Martindale - Director of Policy and Research at PRI, the United Nations Principles for Responsible Investment

TERRAZZA PANORAMICA
18:00  Welcome Cocktail

Wednesday, May 22, 2019

CONFERENCE CENTER
08:00-18:00  Registration

08:30-10:00  PARALLEL SESSIONS
Papers Presentation
(See Parallel Sessions Programme)

Session 1A
Sala Michelangelo

Session 1B
Sala Giotto

Session 1C
Sala Dante

FOYER
10:00-10:30  Coffee Break

SALA MICHELANGELO
10:30 - 12:30  PLENARY 2
Chair: Ermanno Pitacco

The New Scenarios for Risk and Uncertainty and their Implications for Business Strategy and Policy making
Paolo Garonna - Secretary General of the Italian Banking, Insurance, and Finance Federation

Probability of Sufficiency of Solvency II Reserve Risk Margins
Yuriy Kravvych - Winner of the AFIR-ERM Bob Alting von Geusau prize

The Actuarial Association of Europe and its Risk Management Committee
Malcolm Kemp - AAE (Actuarial Association of Europe)
Wednesday, May 22, 2019

**B-ROOF RESTAURANT (FIFTH FLOOR)**
12:30-14:30  Lunch

14:30-15:00  AFIR-ERM General Assembly
Michael Sherris

**CONFERENCE CENTER**
15:00-16:00  **PARALLEL SESSIONS**
Papers Presentation
(See Parallel Sessions Programme)
- Session 2A  
  Sala Michelangelo
- Session 2B  
  Sala Giotto
- Session 2C  
  Sala Dante

**FOYER**
16:00-16:30  Coffee Break

**CONFERENCE CENTER**
16:30-18:00  **PARALLEL SESSIONS**
Papers Presentation
(See Parallel Sessions Programme)
- Session 3A  
  Sala Michelangelo
- Session 3B  
  Sala Giotto
- Session 3C  
  Sala Dante

**B-ROOF RESTAURANT (FIFTH FLOOR)**
20:00-23:00  Colloquium 2019 Gala Dinner – Hotel Baglioni

Thursday, May 23, 2019

**CONFERENCE CENTER**
09:30-17:30  Full day Tour
(See Tours Programme)

Friday, May 24, 2019

**CONFERENCE CENTER**
08:00-13:00  Registration

**SALA MICHELANGELO**
08:45 - 10:30  **PLENARY 3**
Chair: Michael Sherris

Enterprise Risk Management: a crucial evolution path also for “non-financial companies”
Fabio Cerchiai - President ATLANTIA

Yes we CANN!: Machine Learning in Actuarial | Modeling
Mario V. Wüthrich - Professor of the Department of Mathematics at ETH Zurich

**FOYER**
10:30-11:00  Coffee Break

**CONFERENCE CENTER**
11:00-12:45  **PARALLEL SESSIONS**
Papers Presentation
(See Parallel Sessions Programme)
- Session 4A  
  Sala Michelangelo
- Session 4B  
  Sala Giotto
- Session 4C  
  Sala Dante
Friday, May 24, 2019

SALA MICHELANGELO

12:45-13:15  PLENARY 4  
Chair: Marcello Galeotti  

Formal Close of AFIR-ERM Colloquium 2019  

Closing Address  
Giampaolo Crenca  
Ermanno Pitacco  
Marcello Galeotti  
Michael Sherris

B-ROOF RESTAURANT (FIFTH FLOOR)

13:15-15:00  Lunch  

15:00-16:30  WORKSHOPS 1ST PART

Sala Giotto  
Workshop 1  
ERM and QRM in life insurance: an actuarial primer  
Ermanno Pitacco

Sala Dante  
Workshop 2  
Statistical Machine Learning Fundamentals: A Crash Course  
Andres Villegas Ramirez

FOYER

16:30-17:00  Coffee Break

17:00-18:30  WORKSHOPS 2ND PART

Sala Giotto  
Workshop 1  
ERM and QRM in life insurance: an actuarial primer  
Ermanno Pitacco

Sala Dante  
Workshop 2  
Statistical Machine Learning Fundamentals: A Crash Course  
Andres Villegas Ramirez

Scientific Committee

Ermanno Pitacco (Chairman)  
Marcello Galeotti (Vice-Chairman)  
Augusto Bellieri dei Belliera  
Giampaolo Crenca  
Paolo De Angelis  
Paul Embrechts  
Paolo Garonna  
Fabio Grasso  
Roberto Muscogiuri  
Nino Savelli  
Michael Sherris  
Luigi Vannucci  
Marco Pirra (Secretary)

Organizing Committee

Giampaolo Crenca (Chairman)  
Fausto Belliscioni (Vice-Chairman)  
Carla Angela  
Augusto Bellieri dei Belliera  
Federica Campanini  
Marcello Galeotti  
Rosa Maria Lacquaniti  
Mara Pastore  
Marco Pirra  
Valter Puggioni  
Mario Ziantoni  
Emanuele Vannucci  
Cristina Alfieri (Secretary)
Speakers

Marcello Galeotti  
Colloquium President

Michael Sherris  
AFIR-ERM President UNSW Sydney Professor

Marco Bindi  
University of Florence - Prorettore

Ermanno Pitacco  
Scientific Committee President

Giampaolo Crenca  
Organizing Committee President/ISOA President/Presidente Ordine degli Attuari

Card. Peter Turkson  
Cardinal of the Roman Catholic Church. Prefect of the Dicastery for Promoting Integral Human Development

Will Martindale  
Director of Policy and Research at PRI, the United Nations Principles for Responsible Investment

Nino Savelli  
Full professor Cattolica University - Milan - Italy

Maria Fernanda Salas  
Vice Chairwoman, AFIR-ERM. CoS and member of the investments committee, VITALIS

Frank Ashe  
Quantitative Strategies - Owner

Héctor Islas Terán  
VITALIS Asesor Indipendente – Actuary Head of Financial Risk Management and Research Development

Gennaro Olivieri  
Emeritus Professor Luiss University – Rome - Italy

Krzysztof Ostaszewski  
Professor Illinois State University Actuarial Program Director

Olivier Le Courtois  
Emlyon Business School - Professor

Antonino Zanette  
Università di Udine, Dipartimento di Scienze Economiche e Statistiches

Fausto Belliscioni  
Presidente del Consiglio dell’Ordine degli Attuari

Giovanni Rabitti  
Bocconi University Milan - PHD Student

Pauline Ngugnie Diffou  
Université Catholique de Louvain – Researcher

Roberta Melis  
University of Sassari – Contract Professor

Paolo Garonna  
Secretary General of the Italian Banking, Insurance, and Finance Federation

Yuriy Krvavych  
Winner of the AFIR-ERM Bob Alting von Geusau prize

Malcom Kemp  
AAE Actuarial Association of Europe Managing Director (Nematian) / Adjunct Professor (Imperial) / Associate (Barnett Waddingham)

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Honorary Visiting Professor in the Faculty of Actuarial Science and Insurance, Cass Business School

Marco Pirra  
Researcher in Actuarial Studies, Università della Calabria

Alpha Mamodou Balde  
Senior consultant - Chief actuary of ACTIVA Guinea/Qualified actuary within the morocan Association of Actuaries and the Guinean club of actuaries- Member of IAALS life section

Carla Angela  
Full Professor Sapienza University, Rome - Italy

Miriam Pedol  
Alternative Risk Transfer and Insurance Linked Securities Specialist, Group Insurance Capital Solutions in Assicurazioni Generali S.p.A., Trieste, Italy

Rosemary Macedo  
Hightree Group Director of Research

Francesca Berti  
Master Degree (Statistics, Actuarial, and Finance Sciences)

Annie Tay  
FIA CERA - Director Cubic Risk Solutions

Naoki Matsuyama  
Meiji University Professor - School of interdisciplinary Mathematical sciences, Department Chair of Mathematical Sciences Based on Modeling and Analysis

Daniela Yordanova Tabakova  
University of Udine Dept. Of Economics and Statistics – PHD Student Managerial and Actuarial Sciences

Fabio Cerchiai  
ATLANTRA President

Mario V. Wüthrich  
Professor of the Department of Mathematics at ETH Zurich Professor of Actuarial Science

Paolo De Angelis  
Full Professor Sapienza Rome University - Italy

Marco Aleandri  
Qualified Actuary, PhD Candidate - Univ. La Sapienza, Rome - Ageas Group (Brussels) Senior Risk Modelling

Alessia Eletti  
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Emanuele Vannucci  
Researcher University of Pisa

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Luigi Vannucci  
Full professor Florence University - Italy

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David Wilkie  
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Łukasz Delong  
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Andres Villegas Ramirez  
Lecturer, CEPAR, UNSW Business School
We thank very much the sponsors who have allowed us with their support and their participation to better organize the Colloquium.